



# MAGAZINE

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THE I.C.I. MAGAZINE

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The *I.C.I. Magazine* is published for the interest of all who work in I.C.I., and its contents are contributed largely by people in I.C.I. It is edited by Richard Keane and printed at The Kynoch Press, Birmingham, and is published every month by Imperial Chemical Industries Limited, Imperial Chemical House, Millbank, London, S.W.1. Telephone: VICToria 4444. The editor is glad to consider articles for publication, and payment will be made for those accepted.

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FRONT COVER: *Market in Darjeeling, North Bengal. Photograph by D. E. C. Price (Head Office)*

OUR CONTRIBUTORS

E. A. BINGEN has been Joint Overseas Director since July 1951. Until this appointment the whole of his career with I.C.I. from 1927 onwards was in Legal Department at Head Office. He became I.C.I. Solicitor and head of Legal Department in 1940.

PHILIP HARVEY, who works for Plant Protection, established quite a reputation for himself with his book *The Rose in Britain*, now in its third edition. He is a keen grower of flowering shrubs.

F. M. S. HARMAR-BROWN is a frequent contributor to the Magazine, noted chiefly for his clear exposition of technical subjects. But he can also write with a neat turn of wit, which he does here to good effect.

MARGARET REEKIE is press officer for British Nylon Spinners, whose capital is held in equal shares by I.C.I. and Courtaulds.

OURSELVES OVERSEAS

By E. A. Bingen (Joint Overseas Director)

The overseas interests of I.C.I., including both manufacturing and selling companies, today account for the huge turnover of some £160m. a year. How are these interests organised? What degree of control is exercised from London? These and other questions are here discussed in an authoritative article.

I WOULD like to begin by quoting a paragraph from the original I.C.I. circular of 15th December 1926 sent to shareholders in the four constituent companies—Nobel Industries, Brunner Mond, British Dyestuffs Corporation and United Alkali Co.—asking them to exchange their shares for shares in I.C.I. On page 3 of that circular these words occur:

The Company has, of deliberate purpose, been given the title of "IMPERIAL CHEMICAL INDUSTRIES LIMITED." The British Empire is the greatest single economic unit in the world, one in which every patriotic member of the great British Commonwealth has a personal interest. By linking the title of the new Company to that unit, it is intended to lay emphasis upon the fact that the promotion of Imperial trading interests will command the special consideration and thought of those who will be responsible for directing this new Company. The participating Companies already enjoy a world wide trade; their merchanting and manufacturing operations therefore extend throughout the British Dominions overseas; and it will be the avowed intention of the new Company, without limiting its activities in foreign overseas markets, specially to extend the development and importance of the Chemical Industry throughout the Empire.

Twenty-eight years later is perhaps as good a moment as any to ask ourselves how these imperial aspirations of our founders have been fulfilled.

The broad picture is as follows. In the Dominions and overseas there are no fewer than 31 manufacturing companies in which I.C.I. has an interest of 50% or more. In addition there are 16 I.C.I. selling companies abroad—companies which sell our goods and those of

other people. Among them these companies account for a turnover of some £160m. a year. In other words, our overseas interests today are no sideline. They are a major activity, and an activity whose development has not been controlled by a line of policy dictated from London or by a rigid system of supervision but which has grown up gradually with the years, flexible and adaptable to the circumstances of each particular country with its own particular problems.

Let us consider first our manufacturing interests abroad.

I.C.I. was fortunate in inheriting from Nobel Industries Ltd. manufacturing interests in Canada, Australia and South Africa. These interests have undergone changes in corporate structure and name since then; starting from explosives they have broadened out into general chemical manufacturers and have grown in the intervening years with the growth of I.C.I. in capital, turnover, profits, and range of products manufactured. Even so, it is true to say that these old Nobel interests in their present form represent I.C.I.'s largest stake in manufacture overseas. I am referring, of course, to Canadian Industries (1954) Ltd. (82% I.C.I.), Imperial Chemical Industries of Australia and New Zealand Ltd. (57% I.C.I.) and African Explosives and Chemical Industries Ltd. (50% I.C.I.)—all of them large public companies and each of them the largest chemical manufacturer in its own country. Each of these companies still has a large programme of capital expenditure ahead of it, and we firmly believe that their expansion will not only be

profitable to the companies concerned but be of material assistance in the economic growth of the countries they serve.

Parallel with the development of these old Nobel investments in the Dominions, I.C.I. has in the last quarter of a century sponsored the manufacture of various chemical products in Argentina, Brazil, India, Europe and, more recently, in the U.S.A. Let me give you two examples, since the list of territories I have quoted is by no means complete.

New Ventures Abroad

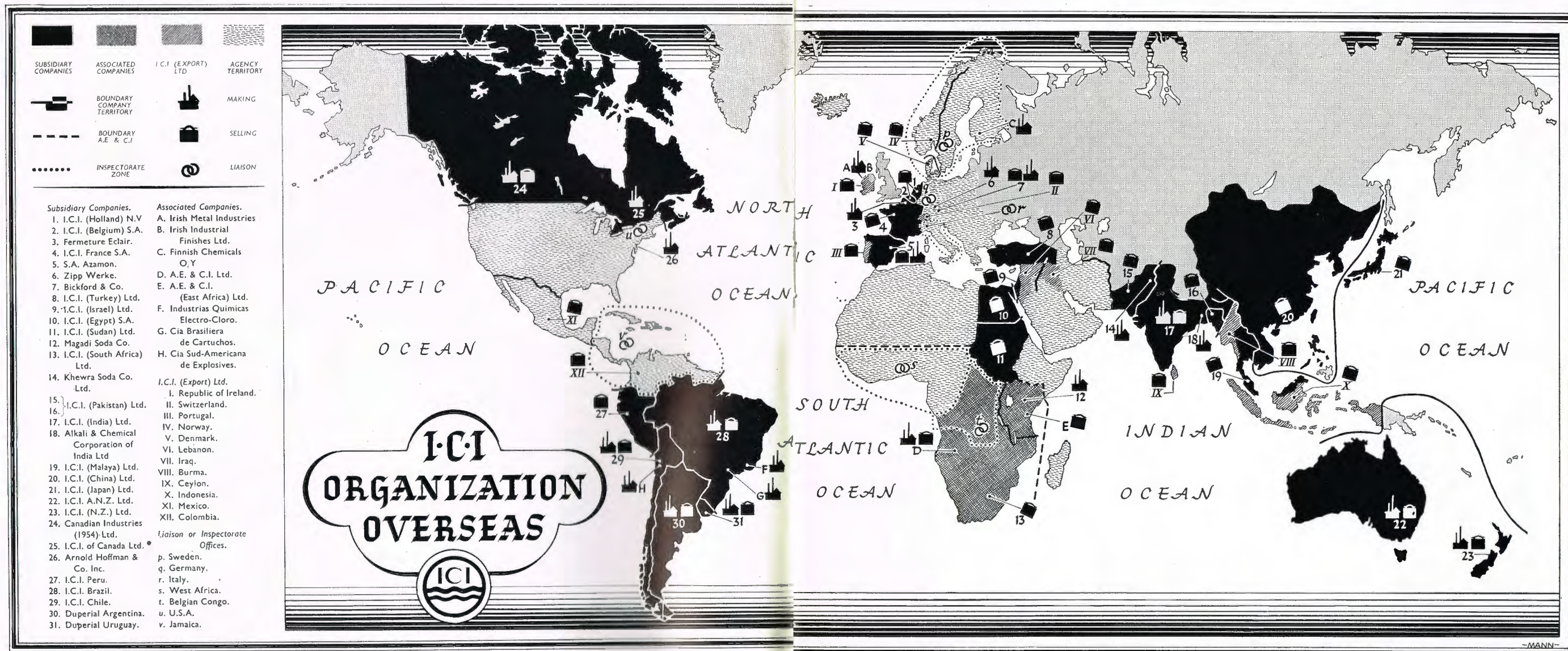
In India (over and above our existing interest in the Alkali and Chemical Corporation of India, manufacturers of chlorine, caustic soda, B.H.C. and paints) two new companies have been recently formed under our auspices for the manufacture of blasting explosives and certain vat dyestuffs. In the U.S.A. we acquired for the first time a manufacturing stake by the acquisition in 1950 of a 70% interest in Arnold Hoffman & Co. Inc., and that company has since expanded its base of operations by the erection of a multi-products vat dyestuffs plant. This is an experiment which we—and doubtless also the American chemical industry—are watching with interest. An entry into the highly volatile and competitive American chemical industry is not the simplest of tasks; but the ultimate prizes are worth the effort they will necessarily entail, and we have no reason to regret our investment.

You may have noticed that our percentage holding in our main manufacturing companies overseas varies substantially, and to some extent this variation is fortuitous, the result of historical causes. The I.C.I. Board is, however, well alive to the advantages which can follow from attracting further local capital into these manufacturing companies; indeed, this is a matter which is always carefully considered in all its aspects when further capital is required overseas.

Twofold Role

Our policy with regard to these manufacturing companies is to play a full part in the development of chemical manufactures abroad. In this connection our role is twofold: first, we must stimulate and encourage our subsidiary and associated companies overseas, on the technical and development sides, so that no opportunities are missed of being in the forefront of manufactures which are likely to be economic and expanding; secondly, we must counsel a policy of





\* Since this map was drawn, the manufacturing interests of I.C.I. of Canada Ltd. have been sold to C.I.L.

caution where political conditions abroad are unstable, where capital cannot be repatriated or profits remitted home, or where a proposition merely looks economic because it is bolstered up by a local tariff or prohibition of imports.

Certainly we cannot rush into manufacture abroad merely to replace the loss of valuable exports. On the other hand, we must always keep well before us the fact that countries which were, a decade or so ago, largely primary producers are now rapidly becoming industrialised and that we cannot, even if we wished, put the clock back; nor must it be forgotten that the growth of such manufacture will in all probability lead to the expansion of other I.C.I. exports from the United Kingdom and that the return on successful

overseas investments will contribute substantially to the problem of our balance of payments.

On the staff side you will find that the overseas manufacturing companies draw their strength almost entirely from local recruitment. While some of the staff started with I.C.I. in the United Kingdom, in general it is natural that overseas companies should prefer to select their own people for the key appointments as they fall vacant.

You may wonder how, with such wide and varied interests overseas, we keep our finger on the pulse of things abroad. Well, it is certainly not I.C.I.'s policy to dictate to overseas companies or, even where we are in a position to do so, to use our share control for the same end.

Indeed, it is basic policy in I.C.I. to see that all our overseas companies have a wide measure of autonomy, both on day-to-day decisions and on wider questions of policy. On policy decisions we naturally expect that our views will be listened to; this we achieve, among other things, by appointing I.C.I. directors and officials at home to the boards of our overseas companies. Management decisions, however, are taken in the board-rooms of those companies and at executive level throughout; any other plan would be unthinkable, and it would not be possible to retain experienced executives in leading positions overseas if their decisions were overruled from home.

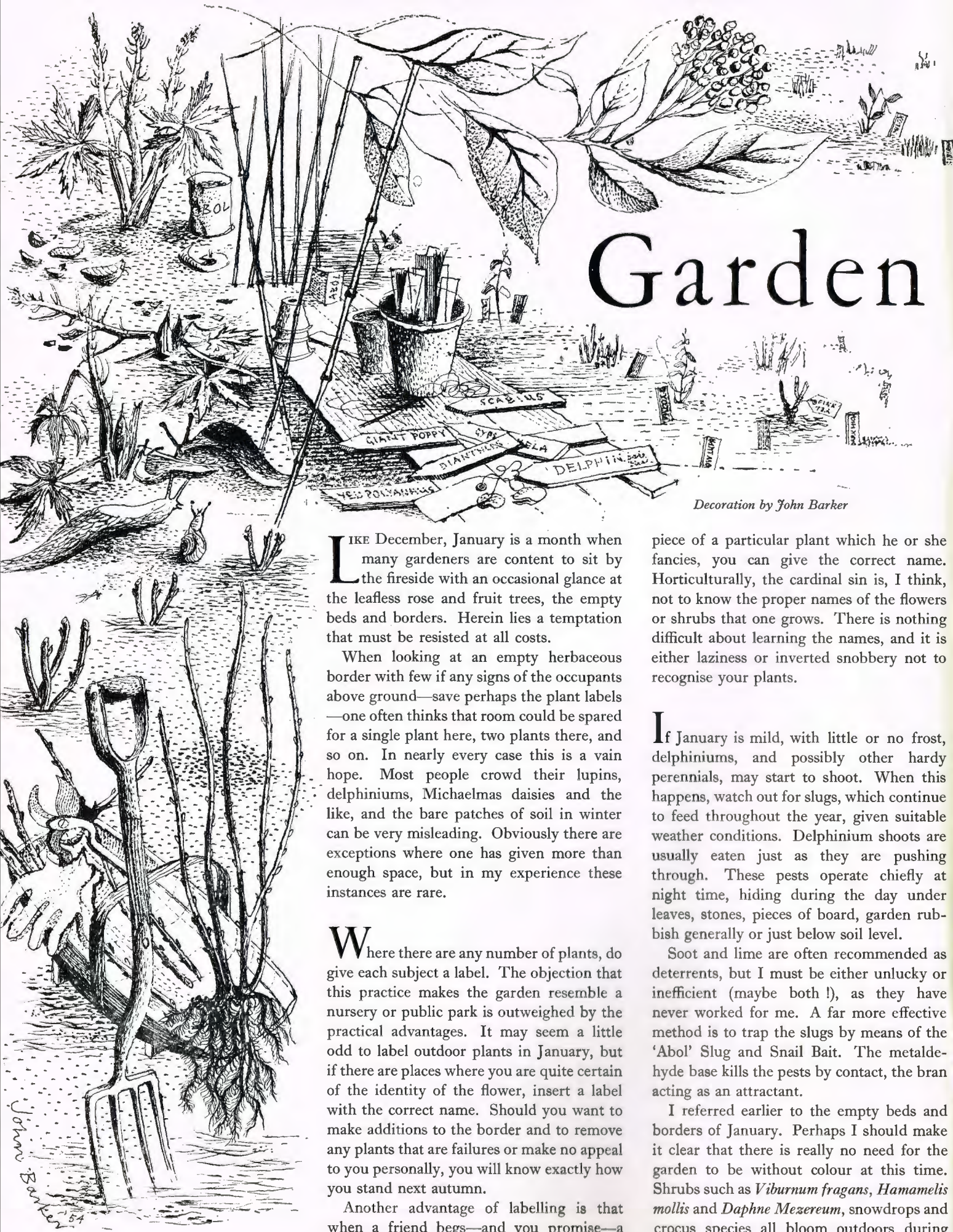
It naturally follows from all this that, if our overseas companies are to prosper as much as they should,

there must be a great deal of travelling between these companies and I.C.I. at home. You may perhaps be surprised to hear that in 1953 the Travel Department at Head Office was responsible for handling over 2500 journeys overseas for I.C.I. employees. These visits naturally cover a wide range of activities.

I.C.I. directors and officials on the boards of our overseas manufacturing companies must attend board meetings overseas and play their part in the formulation of Company policy on the spot; the Overseas Department is responsible for the well-being of our relations with our overseas companies, and their people must regularly pay visits to see that each side knows and understands the other's viewpoint and that no difficulties and frictions are allowed to develop; sales

(Continued on page 11)





# Garden

Decoration by John Barker

**L**IKE December, January is a month when many gardeners are content to sit by the fireside with an occasional glance at the leafless rose and fruit trees, the empty beds and borders. Herein lies a temptation that must be resisted at all costs.

When looking at an empty herbaceous border with few if any signs of the occupants above ground—save perhaps the plant labels—one often thinks that room could be spared for a single plant here, two plants there, and so on. In nearly every case this is a vain hope. Most people crowd their lupins, delphiniums, Michaelmas daisies and the like, and the bare patches of soil in winter can be very misleading. Obviously there are exceptions where one has given more than enough space, but in my experience these instances are rare.

**W**here there are any number of plants, do give each subject a label. The objection that this practice makes the garden resemble a nursery or public park is outweighed by the practical advantages. It may seem a little odd to label outdoor plants in January, but if there are places where you are quite certain of the identity of the flower, insert a label with the correct name. Should you want to make additions to the border and to remove any plants that are failures or make no appeal to you personally, you will know exactly how you stand next autumn.

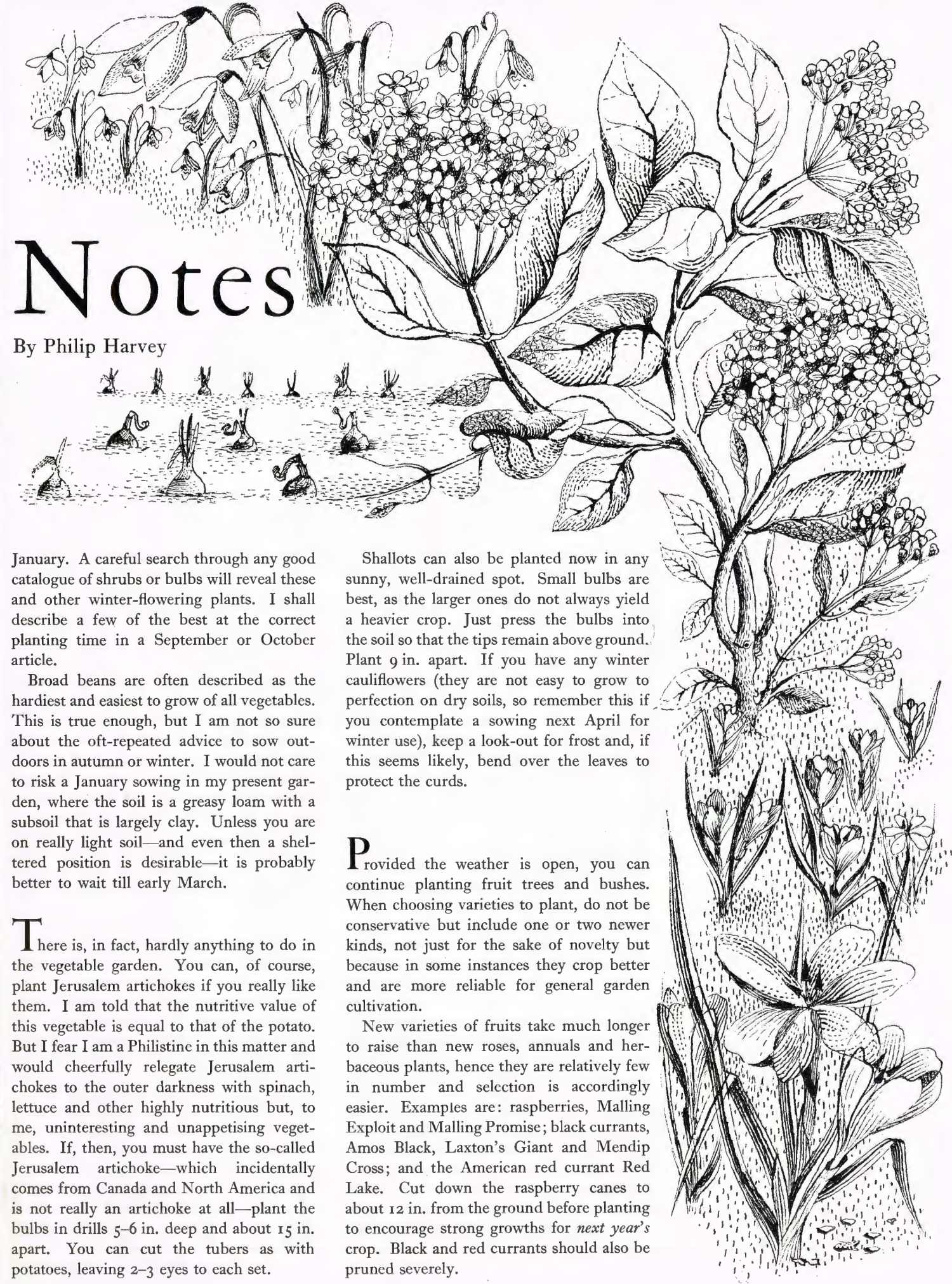
Another advantage of labelling is that when a friend begs—and you promise—a

piece of a particular plant which he or she fancies, you can give the correct name. Horticulturally, the cardinal sin is, I think, not to know the proper names of the flowers or shrubs that one grows. There is nothing difficult about learning the names, and it is either laziness or inverted snobbery not to recognise your plants.

**I**f January is mild, with little or no frost, delphiniums, and possibly other hardy perennials, may start to shoot. When this happens, watch out for slugs, which continue to feed throughout the year, given suitable weather conditions. Delphinium shoots are usually eaten just as they are pushing through. These pests operate chiefly at night time, hiding during the day under leaves, stones, pieces of board, garden rubbish generally or just below soil level.

Soot and lime are often recommended as deterrents, but I must be either unlucky or inefficient (maybe both!), as they have never worked for me. A far more effective method is to trap the slugs by means of the 'Abol' Slug and Snail Bait. The metaldehyde base kills the pests by contact, the bran acting as an attractant.

I referred earlier to the empty beds and borders of January. Perhaps I should make it clear that there is really no need for the garden to be without colour at this time. Shrubs such as *Viburnum fragans*, *Hamamelis mollis* and *Daphne Mezereum*, snowdrops and crocus species all bloom outdoors during



# Notes

By Philip Harvey

January. A careful search through any good catalogue of shrubs or bulbs will reveal these and other winter-flowering plants. I shall describe a few of the best at the correct planting time in a September or October article.

Broad beans are often described as the hardiest and easiest to grow of all vegetables. This is true enough, but I am not so sure about the oft-repeated advice to sow outdoors in autumn or winter. I would not care to risk a January sowing in my present garden, where the soil is a greasy loam with a subsoil that is largely clay. Unless you are on really light soil—and even then a sheltered position is desirable—it is probably better to wait till early March.

**T**here is, in fact, hardly anything to do in the vegetable garden. You can, of course, plant Jerusalem artichokes if you really like them. I am told that the nutritive value of this vegetable is equal to that of the potato. But I fear I am a Philistine in this matter and would cheerfully relegate Jerusalem artichokes to the outer darkness with spinach, lettuce and other highly nutritious but, to me, uninteresting and unappetising vegetables. If, then, you must have the so-called Jerusalem artichoke—which incidentally comes from Canada and North America and is not really an artichoke at all—plant the bulbs in drills 5–6 in. deep and about 15 in. apart. You can cut the tubers as with potatoes, leaving 2–3 eyes to each set.

Shallots can also be planted now in any sunny, well-drained spot. Small bulbs are best, as the larger ones do not always yield a heavier crop. Just press the bulbs into the soil so that the tips remain above ground. Plant 9 in. apart. If you have any winter cauliflowers (they are not easy to grow to perfection on dry soils, so remember this if you contemplate a sowing next April for winter use), keep a look-out for frost and, if this seems likely, bend over the leaves to protect the curds.

**P**rovided the weather is open, you can continue planting fruit trees and bushes. When choosing varieties to plant, do not be conservative but include one or two newer kinds, not just for the sake of novelty but because in some instances they crop better and are more reliable for general garden cultivation.

New varieties of fruits take much longer to raise than new roses, annuals and herbaceous plants, hence they are relatively few in number and selection is accordingly easier. Examples are: raspberries, Malling Exploit and Malling Promise; black currants, Amos Black, Laxton's Giant and Mendip Cross; and the American red currant Red Lake. Cut down the raspberry canes to about 12 in. from the ground before planting to encourage strong growths for next year's crop. Black and red currants should also be pruned severely.



# CENTRAL COUNCIL

*A £20 retirement present after 35 years' service, revised conditions for younger promotion to staff grade, and small adjustments to the rules of the Profit Sharing Scheme—these were among the salient points at an exceptionally lengthy session of Central Council at Blackpool.*

Sketches by Fred May

THE 38th meeting of the Central Council will probably go down in history as one of the longest ever held. As it drew to a belated close a series of muffled reports even seemed to indicate that some of the members had shot themselves in despair; but it turned out to be only the popping of balloons being over-hastily inflated for the masonic ball that was to follow us in the Spanish Hall.

The time-consuming topic of the day was a six-page report on joint consultation in I.C.I., embodying sixteen observations and recommendations on the subject by Division Councils and Central Labour Department. Seeing this at the outset of the meeting, and against it in the agenda the stark words "To discuss," some faces lengthened noticeably. But when all was said and done, delegates were able to report back to their Divisions that with few exceptions Division Councils' recommendations on joint consultation had met with the general agreement of the Council.

Council opened with Mr. A. J. Quig reading from the chair a message of regret for his absence from Dr. Alexander Fleck, who was visiting the I.C.I. interests in Australia and New Zealand.

"When he became Chairman in the middle of last year," Mr. Quig said, "Dr. Fleck set himself the task, which he is tackling with great enthusiasm, of visiting all our overseas companies and seeing at first hand the many problems which we have to face in expanding our export trade and in increasing our overseas manufactures. You will, I am sure, appreciate how important this is when I remind you that our exports now account for something like 30% of our total turnover from manufactures at home, and that our overseas interests are comparable in size and importance with our interests in the United Kingdom and are, I think, just as complex."

After referring with regret to the deaths of Mr. J. H. Wadsworth and Sir Wallace Akers, Mr. Quig went on to give a review of the Company's activities which included the following observations:

"Since the end of the last war and up to the end of last

year I.C.I. has spent £163m. on new buildings and plants and on extensions to existing plants. Of this, no less than £49m. was used for developing entirely new products, of which £12m. has been used for the initial stages of developing 'Ardil' and 'Terylene.' This capital expenditure still goes on at a high rate, and you may be interested to hear that in the present year it is running at the rate of more than £30m. *As a result of all this expenditure we shall soon have twice as much manufacturing capacity as we had in 1945, and there is still no end in sight to the future developments which will have to be financed.*

"One matter which particularly concerns Central Council on which I should like to say a few words is the question of Staff Grade sickness absence. It has from time to time in the last few years been the unpleasant duty of the Board to point to the unsatisfactory Staff Grade sickness absence, and it is therefore with some gratification that I am able to tell you that these figures have recently shown some improvement. It is rather early to assess adequately the effect of the abolition of the quota, but I hope that in twelve months' time we shall be able to demonstrate on a chart a very different picture from the one that used to be displayed at these meetings."

Mr. J. A. L. Young, as head of Pensions Department, which administers the I.C.I. Profit Sharing Scheme, reported on the progress of the scheme. All outstanding points under discussion with the Inland Revenue and Treasury, he said, had now been cleared up, and a resolution formally adopting the scheme had been passed by the Board a week before. Only one or two provisions of the scheme had had to be altered since the preliminary announcement was made. The scheme now included all employees who could satisfy conditions of age and length of service, with one exception. The directors had decided to exclude themselves from participation, since it was on their recommendation that the rate of the annual dividend depended, and on that depended the size of the profit sharing bonus. They felt that it would be wrong for a question depending on their decision to have any bearing on their personal rights.

It had been decided to include all part-time workers, irrespective of the hours normally worked—the number of hours worked, of course, being reflected in the amount of the profit sharing bonus. But the fact that part-time workers had been included in the Profit Sharing Scheme should not be taken as an indication that they could be included in any other Company schemes from which they were now excluded.



Mr. J. A. L. Young

from Dyestuffs and a staff member from General Chemicals.

There was pleasant news from Mr. E. T. Grint, who rose to give the Company's reply to the resolution agreed at the previous meeting "that the Company be asked to give consideration to the introduction of an additional long service award where an employee retires after forty or more years' service." The Board, said Mr. Grint, were in agreement with the underlying purpose of the resolution.

"They did, however, feel," he confessed, "that in choosing forty years as the period after which a retirement gift would be given—if I may call it that to disassociate it from the standard long service award—we were bound to create anomalies. There would, for example, be the case of the man who had served for thirty-nine years and who in the ordinary run of things would miss the clock; and if this resolution was adopted he would lose on both counts because he would not have the retirement gift either. But in any arrangement of this sort where a specific period of service is indicated there must be borderline cases, and that will have to be faced. But the Board did feel that it would be more appropriate, more fitting, and probably on the whole fairer, if instead of accepting the resolution in the form in which it was presented the period of service after which the retirement gift will be given was changed from forty years' service to thirty-five or more years' service. That is point one.

"The other point is this: the Board felt (and I think the mover and seconder of the resolution also had this in mind) that any arrangement of this sort should be on a

more personal basis than is possible under the Long Service Award Scheme, and they have decided that in the case of this retirement gift the employee shall have the freedom to choose his present. That gives rise to quite a few complications, and there are two important reservations which I would like to make clear right from the start. In the first place, the gift cannot be in monetary form. The Board did not feel that it would be appropriate or fitting. The other reservation is that the gift is intended to be—and I make this quite plain to the Council—of the order of (and please note those words) £20 in value; but if you are going to choose something, you cannot always necessarily choose an article which will come to the exact amount. In no case does anyone get the change back!

"Finally, I should say it is the Board's hope that, as the result of the introduction of this arrangement, there will be an appropriate ceremony at the place of work in all cases where an employee leaves the Company after thirty-five or more years' service, and that, wherever possible, that ceremony should take place as near as possible to the actual day of his retirement.

Next Mr. R. A. Banks announced an important change in the Staff Grade Scheme, which had been made in response to a resolution at the previous meeting. The resolution asked that all workers should be eligible for promotion to Staff Grade on completion of three years with the Company provided they had attained the age of 20, rather than having to complete three years' service after the age of 21 before being considered eligible.

The Board did not accept the resolution entirely, he said, but agreed that all workers should be eligible on completion of three years' service provided they had attained the age of 21.

Two Pension Fund matters were next on the agenda. The first was the reply to a resolution agreed at the previous meeting, asking the Board to consider as a matter of urgency the possibility of giving further assistance to pensioners who joined the fund in its early days. Mr. Young replied that the Board had decided that the resolution could not be considered until the actuary's report on the next valuation had been received in 1956.

This was because the Company's policy was firstly that pensions to workers would be provided only through the medium of the Workers' Pension Fund, and secondly that alterations to the Workers' Pension Fund involving additional liability would only be considered at the time of a quinquennial actuarial valuation.

It had also been recommended at the previous Council



Mr. J. Layden



meeting that the Pension Fund rules should be altered to allow optional entry into the Fund for an employee joining the Company on or after the age of 55, because at and after this age he would not be able to qualify for a pension. Mr. Young reported that the trustees would be asked to agree to this modification when they met on 10th December, after which it would become effective. The necessary alterations to the rules would be incorporated when other amendments were next being made.



Mr. A. P. Cattle

On the subject of the Pension Fund generally, Mr. Young told the Council that the Fund's securities had, for the first time in many years, been valued at more than they cost—£34,000 more. This compared with a depreciation figure for the previous year of over £1 million.

Before lunch the meeting adjourned to the cinema to hear an illustrated talk by Mr. J. L. S. Steel. It was the story of "A Routine Visit to Latin America"—routine in the sense that

such visits to overseas countries by I.C.I. representatives are taking place almost every day. Mr. Steel's vivid impressions of the places he had visited and the people he had met left his audience with a keen appreciation of the problems that face I.C.I. in overseas markets, ranging from mosquitoes to currency troubles.

For the discussion of the report "Joint Consultation in I.C.I." Mr. Quig left the chair in favour of Mr. S. P. Chambers, who reminded Council of how the report came into being. In November 1953 the Chairman had said that the whole question of joint consultation in I.C.I. was to be the subject of a review by a management committee. That committee had completed its work; the views of the Division and Works Councils were obtained, and a summary of their views was now before Council.

The perennial Mr. Tom McCall (Nobel), back in office already as chairman of the workers' representatives, started the discussion and the fact that this was a discussion did not preclude members from putting motions before Council on the subject of joint consultation. Mr. A. R. Allardyce (Billingham) moved that "The practice of inviting observers should be increased to cover management as well as employees. Observers should be granted the same privileges regarding payment and time off as works councillors, but the effect on productivity of having a large number of observers at meetings should not be overlooked." This was carried with only two dissentient votes. A blanket motion covered a series of eleven recommendations in the report about the wider publicity of Works Council Scheme business, and this was carried unanimously.

Council also voted in favour of copies of the Chairman's address being given to members immediately after it had been delivered for them to take back to their works. On other subjects arising from the report there was a wider measure of disagreement, and several motions were referred back to Division councils. Mr. Chambers wound up the debate by saying that the Board would consider the matter very carefully in the light of the interesting discussion which had taken place.

Sir Ewart Smith spoke on the safety campaign. "I want you to note," he said, "that whereas in the first half of 1953 we had for the Company a rate which was under one, we slipped back in the second half of last year and we slipped back again in the first half of this year. Because I am an optimist I am not in the least deterred by that from thinking—in fact I would say I know—that we can do, and we must do, a great deal better."

He mentioned that the best Canadian and American firms, carrying out work comparable to I.C.I.'s, had a frequency rate of between 0.1 and 0.4—compared with the I.C.I. rate of 1.0. "I did not find a leading company which I visited where there was not a monthly meeting of the man responsible at the top with all the line supervisors, and then, in turn, where there was not at least a monthly meeting of those supervisors with their subordinates, including foremen; and then the foremen in every case had a monthly meeting with all their men."

The I.C.I. Accident Prevention Trophy, Sir Ewart announced, had been won jointly by Alkali and Dyestuffs Divisions, whose improvements on their previous best records were within 0.5% of each other. They were the two Divisions which had consistently shown the best all-round safety figures, and they had shown that the better people were, the higher relative rate of progress they could make.

The meeting ended on a note of near-unanimity on the motion put by Mr. D. O'Leary (Metals) that "the Company be asked to provide facilities to allow for the controlled purchase of I.C.I. products by employees." Paints, fertilizers, 'Lightning' Fasteners, salt, sporting ammunition and 'Savlon' were all cited as commodities that I.C.I. employees would like to buy at reduced prices. Mr. Grint said that the whole question was at present under consideration; he advised against undue optimism, in view of the many real difficulties involved, but he hoped there would be something—not necessarily favourable—to report at Scarborough in May.

The motion was carried, with only two dissenters. Who on earth could they have been? M.J.D.



Mr. C. Morris

#### OURSELVES OVERSEAS (continued from page 5)

staff in Divisions and technical service experts, who must see that our products are properly applied by our customers, must likewise travel, for business in the competitive export markets of the world is neither to be secured nor retained for the asking; in addition, technical experts from home, including those on the research, development and production sides, must help our overseas companies in the construction and initial operation of new plants and in plans for the development of new products and processes overseas, for we have patents and process agreements with our main overseas companies which are engaged in manufacture abroad and under which they have a first call on I.C.I. accumulated knowledge in their fields of activities and a similar call on future I.C.I. developments.

This does not, of course, mean that these overseas companies are not encouraged to develop and expand their own research and development organisations—quite the reverse—but merely that I.C.I., which necessarily spends more than any one of the overseas companies can on research and development, finds it wise—and this would be just the same in the absence of specific agreements—to make its own pool of knowledge available to such companies in the common family interest.

These visits are not, of course, all one way; many of the employees from I.C.I. companies overseas come over here regularly to maintain these contacts in reverse and to learn what they can from I.C.I.—from the Divisions, the factories and Head Office. It is certainly true that on many occasions a visit of 3000 miles, made possible overnight by the aeroplane, can do more positive good than a desultory correspondence lasting over a matter of months.

Complementary to these manufacturing companies—sometimes alongside of them, sometimes part of them, sometimes overlapping—are the I.C.I. merchandising companies overseas. Here again there is no complete pattern running throughout.

The export departments of the Divisions are, of course, the mainspring of our export sales, though in all cases the Overseas Department at Head Office holds something in the nature of a watching brief over our export activities. In small markets we still sell through agents; when business warrants something more than that we sometimes sell through a branch of I.C.I. (Export) Ltd. registered in an overseas territory; and when it gets to a larger overseas market, such as India, Malaya, China, South Africa, the major European markets or larger South American republics, we sell there through our own merchandising company, which, as you know, normally uses I.C.I. as

part of its title, as for example I.C.I. (India) Ltd. In Canada and Australia our products are, in the main, sold through C.I.L. (1954) and I.C.I.A.N.Z., companies which are also, and indeed primarily, engaged in the manufacture of a wide range of chemicals.

You may wonder why we have found it worth while establishing our own merchandising companies overseas rather than selling in the old conventional way through agents. Experience has, however, shown that, where you have a large overseas market with a large volume of turnover in a variety of products which require technical sales services as an aid to sales and where the business is sufficiently permanent to warrant a permanent establishment overseas, there is every advantage in having our own wholly owned merchandising companies with I.C.I. *esprit de corps* and I.C.I. service behind them to develop our sales in such markets. In addition, these companies are able to spread their overheads by handling the products of other manufacturers, British and foreign, which can be easily sold alongside our own without any corresponding increase of staff.

This is quite an important feature of our business abroad; if one looks at the position globally a turnover of £20m. is normally handled by our overseas merchandising companies in products not of I.C.I. manufacture.

Our overseas merchandising companies are normally 100% owned by I.C.I., and it is desirable that this should be so, for the terms of trade as between I.C.I. and these companies must be flexible if advantage is to be taken of market opportunities. The overseas companies sometimes gain and sometimes lose on this; but such flexibility would not be easy to continue if there were outside shareholders, and they would not be attracted by shares in a company which is so largely dependent on one supplier.

The success of these merchandising companies can be judged by the fact that our exports are now running at around £60m. per annum. This represents in round figures something like 30% of our total turnover arising from manufactures in the United Kingdom. If one includes indirect exports—that is to say, if one takes into account the value of our products which have been sold to manufacturers at home and have been incorporated after some process of manufacture into their exports—then the percentage would be perhaps 10% higher. These are remarkable figures by any reckoning. These export figures compare with a pre-war export turnover of £10m.—an enormous increase even if allowance is made for the higher selling prices ruling today compared with pre-war days.

#### CLIMBERS (continued from page 17)

their own roots seem less susceptible. Always obtain these where possible.

Ceanothus are unsurpassed for south and west walls. There are both blue and pink forms. Wistarias require plenty of room and virtually no pruning until they seem likely to exceed their allotted space, when the laterals may be cut back to about five buds in late July. The variety *W. floribunda macrobotrys* (multi-juga) is especially choice, the racemes of lilac-purple flowers often exceeding three feet in length.

*Tropaeolum speciosum*, the flame nasturtium, is a perennial climber with creeping undergrowth rhizomes. It is

almost a weed in the Scottish highlands and is usually happiest in the north and west, especially in the Lake District. A cool, deep soil, free from lime, is essential. Work in plenty of peat and leaf mould, and as with clematis, plant a dwarf evergreen in front to shade the roots. The north side of a hedge or wall are both suitable positions. Pot-grown specimens already started into growth are best and should be planted in early April. A hot, dry position is absolutely useless, but once you have seen the brilliant vermilion-scarlet flowers you will hardly grudge this remarkable plant a little extra care.



# FLYING TECHNICIAN

EVERYONE has heard of the man who spends happy hours planning imaginary journeys from the pages of Bradshaw. Bill Mitchell is luckier than that. He makes real journeys—sometimes long and fascinating ones—without consulting a timetable at all or so much as buying a ticket.

The first of these magic-carpet adventures was almost too good to be true. One day in 1947 Bill was hard at work in the Flexible Fuel Tank Department at Marston Excelsior Ltd.; the next he was sitting at ease in an aircraft of the King's Flight, accompanying the Royal Family to South Africa.

Or perhaps not entirely at ease, because (quite literally) it was his work which was taking him along. He was there because the aircraft carrying the royal travellers was a Viking, one of the first passenger planes to be fitted with flexible fuel tanks. Bill, having spent seven years helping his colleagues at Marstons to develop the innovation, was by now something of an expert on the subject, and his job on this particular flight was to supervise the maintenance of the tanks.

Like so many important contributions to the progress of the aircraft industry, the flexible fuel tank was developed under stress of war. Among their other problems, aircraft designers were faced with the urgent need to provide extra fuel capacity, and this had to be done without adding a single unnecessary pound to the weight of the aircraft or occupying a single unnecessary square foot of storage space. The Marston flexible tank provided one of the answers.

Made of synthetic rubber-like fabric, protected by several layers of proofing material, flexible tanks have three big advantages over the more traditional metal containers. They are lighter; they are more adaptable and can be fitted snugly into space too awkwardly shaped or inaccessible to take rigid tanks; and, since the resilient material "gives" on impact, they do much to reduce the risk of fire in emergency landings.

Bill Mitchell came into the picture in 1940, when the flexible tank was still in the experimental stage and on the secret list. At that time the department consisted of a few men building prototype tanks for military aircraft. Each one was built by hand, and it is interesting to know that even today, when the department has expanded con-

siderably and Marston tanks are in service all over the world, the same individual attention is paid to their production.

There are good reasons for this. As the lives of crews and passengers may depend on their reliability, quality is a basic requirement, and the tanks must be given the same care at all stages of manufacture as, say, parachutes. Then, by their very nature, flexible tanks can never be mass produced.

Each one must be tailor-made not only for the particular aircraft it is to serve but for the position it is to occupy (the Viscount aircraft, for instance, carries ten tanks in each wing, graduated in size like a set of eccentrically shaped jugs). And, of course, their size adds to production difficulties. A tank of 200 gallons capacity is quite a "baby" model: 600 gallons is nearer the average.

Bill explained to me how the tanks are made. The first step after the tank has been designed is to make a collapsible light alloy jig—the skeleton or framework round which the tank is built. The covering material is cut and shaped much as it might be by a tailor, fitted accurately over the frame and cemented into position with liquid dope. Fire- and crash-resisting media are built on in the same way, and after curing the jigs are dismantled and withdrawn through an inspection hole. The tanks are then pressure tested and carefully inspected.

Bill is equally at home in the assembly shops of most of the major aircraft manufacturers, where he helps to install Marston tanks in prototype and early production aircraft, and at civil and R.A.F. aerodromes all over the country, where he keeps a watchful eye on servicing and maintenance.

Nowadays, of course, British aircraft are finding their way in ever-increasing numbers into the civilian and Service air fleets of Commonwealth and foreign countries. Since his trip to South Africa Bill has sampled the airfields of Switzerland, Sweden, Italy, Hong Kong, Singapore and India. One tour of duty alone kept him in the Middle East for four months.

Speaking of modesty, I asked Bill how he felt when he heard that his work was to bring him the award of the B.E.M. in the 1953 New Year Honours. "I was flabbergasted," he said. "After all, I've only been doing my job, and a very ordinary one at that."

D.B.T.



Bill Mitchell



# CLIMBERS

By Philip Harvey (Plant Protection)

There can be few homes, whether in town or country, that are not made more beautiful by a climbing rose, a wistaria or a clematis. Here Philip Harvey, himself a noted rose grower, discusses the choice and management of the wide variety of climbing plants and shrubs available today.

MANY gardeners are decidedly unimaginative over their choice of shrubs and climbers for planting against a house wall. While no one wants to cover a house completely with vegetation, thereby preventing light from reaching the windows, most houses look far more attractive if some of the walls are covered with ornamental shrubs or climbers. Experts sometimes recommend that plants grown in this way should not extend beyond bedroom windows, otherwise they are awkward to manage; but I cannot agree. Provided the flowering or berrying shoots start at a reasonable height from the ground and the base of the plant does not look bare, the ultimate height should not matter. Careful attention as regards pruning and training when the plant is young will always keep it within manageable proportions.

Many very beautiful shrubs which are somewhat tender when planted in the open can be grown successfully against a house wall. They are sheltered from cold winds, and the young wood ripens more readily as the result of the heat trapped by the wall.

A south wall receives the maximum sunlight. The majority of plants grown against walls, however, will usually give equally good results on a western wall. An eastern aspect is less satisfactory, while very few climbers or shrubs are happy facing north.

The type of soil is less important than the actual preparation before planting. Unless the ground is heavily impregnated with lime or chalk, you can grow practically anything. Do not be misled by the neighbour who tells you that the climbing rose or wistaria on the wall of his house has been there for forty years,

if not longer, and has never had a top-dressing of manure or fertilizer since it was first planted. You can be fairly confident that if the soil was not in really good heart, plenty of nutriment in the way of farmyard manure—probably cheap and easy to obtain in those days—was dug into the ground before planting.

If in 1955 you find it difficult to secure farmyard manure (though in most cases it can be procured, if not locally, within ten miles or so), work in plenty of compost and peat. Bonemeal is a useful source of phosphates and is relatively slow acting. On light soils, which are often deficient in potash, it is always helpful to add sulphate of potash and bonfire ashes.

Do space your plants generously. Eight feet apart is by no means excessive. Firm planting is, of course, fundamental, and the nursery soil mark on the stem is a useful guide. Some support is usually necessary except for a self-clinging plant like *Hydrangea petiolaris*. *Cotoneaster horizontalis*, most pyracanthas, and the popular *Cydonia* or *Chaenomeles* as it is now called, often climb with no assistance, the stems eventually becoming sufficiently self-supporting by reason of the stiff growths.

Support is sometimes given by means of strips of cloth passed over the stems, strong nails being driven into the wall at either side of the cloth. I think this method invariably loosens the mortar, and it certainly does not improve the appearance of the wall. A better means of support is to drive in eyeletted spikes at eighteen-inch intervals up the wall. They should be about eight inches apart and say three inches from the surface of the wall. You can then strain galvanised



PYRACANTHA. An evergreen semi-climber particularly suitable for towns.

wire on these spikes. Obviously these distances will vary according to the type of shrub or climber. Wire netting or lattice work are cumbersome alternatives.

Hard pruning of plants on walls is a great mistake. You should aim at a somewhat loose, informal appearance, removing all diseased, worn-out or misplaced growths from time to time. Most wall shrubs and climbers can be divided into two main groups. Those which bloom on the previous summer's growth comprise the majority and are cut back directly after flowering. All shoots that have flowered are removed,

leaving sufficient young wood for next year. The evergreen *Ceanothus dentatus*, which blooms in May, is a typical example. The second group includes those plants which flower on the current season's growth. The well-known violet-purple *Clematis Jackmanii* is a typical instance and may be pruned to a few inches from soil level in February.

A north wall often worries amateurs. Can utility be combined with beauty? Yes, though one's choice is limited. Most climbing roses demand a very sunny position for first-class results, but a few will succeed on the north side of a wall or fence unless there are overhanging trees. I name the single sulphur-yellow Mermaid, the creamy-yellow Albéric Barbier, and the old white Noisette climber Mme. Alfred Carrière.

*Cotoneaster horizontalis* is another north wall favourite. It may attain ten feet, though six or seven feet is a more general height unless the plant is treated generously as regards feeding. The dark green glossy leaves

turn orange-red in autumn, and the small red berries are very freely borne. The name *horizontalis* refers to the branches, which are flat and opposite, not unlike fish-bones.

Other climbers or shrubs for a north aspect include *Hydrangea petiolaris*, a deciduous, self-clinging climber which bears flat white flowers in June; *Parthenocissus Henryana* (*Vitis Henryana*), a very vigorous species allied to the familiar Virginia creeper and happiest on a north wall, the leaves turning a rich deep red in autumn; *Chaenomeles lagenaria* (the latest and I think





TROPAEOLUM SPECIOSUM. *The flame nasturtium, very popular in Scotland.*

most awkward name for the familiar *Cydonia japonica* or Japanese quince). Of spreading habit, it ultimately reaches six or seven feet. There are several varieties, in shades of crimson, salmon, pink and white, the majority making good quince jelly.

Pyracantha or firethorn is a showy, evergreen climber, eventually reaching at least fifteen feet and as

much across. The best form is probably *P. coccinea Lalandii* with brilliant orange-red berries. On a north wall they are often overlooked by birds. Do not forget the winter-flowering jasmine (*Jasminum nudiflorum*), which blooms earlier and more freely on a wall.

Clematis are tricky unless you consider their likes



CHAENOMELES. *A magnificent specimen, popularly but erroneously called Japonica.*

and dislikes. They must have their roots shaded and the flowers in the sun, i.e. no overhanging trees. *C. Jackmanii*, *C. montana*, *C. viticella* and their varieties succeed on a north wall, provided a dwarf evergreen such as lavender is planted in front. When planting, cut down to nine inches from soil level. In future years prune the *Jackmanii* and *viticella* varieties

to within a few inches of the ground in February. Other types of clematis demand very little pruning.

Clematis are liable to a fungus disease which causes a hitherto healthy plant to wilt as if it had been cut through the stem. Sometimes new basal growths appear, but with grafted plants recovery is problematic. There is no known cure, though plants on

(Continued on page 11)



# NYLONS GALORE

By Margaret Reekie (British Nylon Spinners)

Seven pairs of nylon stockings a year for every feminine pair of legs over 15 years old—this is the current sale of nylon stockings in Britain. Even so, women here use over 50% less nylons than women in America. Today the era of nylons shortage is over. Fact can now be disentangled from folk-lore, and a sure feminine touch here puts paid to some nylon myths.

*Illustrated with American advertising material kindly lent by Du Pont*

**A**N area of about 850 square inches, of which about 280 are normally visible, covered by  $3\frac{3}{4}$  miles of yarn. A million and a half loops, knitted on a complicated arrangement of slurcocks, striking jacks, dividers, jack sinkers, bearded needles and vital pieces of machinery called knockover bits. It all adds up to the modern synonym for stockings—a pair of nylons.

Nylon stockings have reached a very interesting stage of development. The shortage era, when even an anonymous pair in the wrong size was cherished for its scarcity value, came to an end at about the same time as the finish of meat rationing. With increased output from Billingham and Pontypool swelling the stream of supplies over the counter, shoppers can at last choose from a comprehensive stock. It is fifteen years, back in the pre-nylon period, since women have seen really fully equipped stocking departments. This in itself is a challenge to the trade, as nearly two hundred manufacturers of nylon stockings are well aware.

Current production works out at about 7.7 pairs of nylons a year for every woman in Britain over 15 years old. This is still well

below the American average of twelve pairs a head—or rather for every pair of feminine legs—but it does show a notable improvement in supplies compared with 1953, when there were only enough nylons for 5.5 pairs all round.

Estimating consumption as early as 15 years old is not merely wishful thinking from the sales sides. Surveys have registered a 95% preference for nylons in the 15-59 age group. Over 60 the preference is at present less marked, but the thicker nylons coming into the shops now are putting up the percentage.

Millions of miles of nylon yarns have passed over the uptwisters since the first fully fashioned British nylon stockings were distributed to coupon-clutching queues on 2nd December 1946, the official release date agreed by the hosiery trade. These all-night queues were in themselves something of a phenomenon. Shipments from overseas had been limited by the pocket capacity of the U.S.A. forces, but by some mysterious bush telegraph women who had never even seen a pair of nylons knew all about them. The normal commercial pattern of a new product fighting its way against consumer



*Advertisement for Cannon Mills stockings*



*Salvador Dali painting advertising Bryans stockings*

indifference was reversed: the general public clamoured for supplies.

Nylon folk-lore flourished. Perhaps its most attractive character was a hard-working beetle, of foreign origin, reported to be able to repair ladders five inches long in under forty seconds by glandular secretions. Women waited to cross until the road was clear under the mistaken belief that their nylons would vanish if they went near a motor exhaust. Drinks were served without ice in homes where the quite unsubstantiated theory was held that it did nylons good to freeze them in the ice-tray. A pair of nylons was offered to the Louvre on the grounds that a place should be found for them among the works of art.

All the early nylons, hailed with delight as "exquisitely fine" and "wisps of loveliness," were of the type now tolerantly referred to by most young women as "the thick kind." The finest were 30 denier. Women were enthusiastic about their hard-wearing qualities, but already from across the Atlantic came rumours of even sheerer nylons. Glamour reared its beautiful head. B.N.S., now producing at a much higher rate at Pontypool, began to make 15 denier nylon yarn, twice as fine as 30 denier. Hosiery manufacturers installed finer gauge machinery as rapidly as import permits allowed, and in September 1950 the Board of Trade announced that 15 denier nylon yarn would be distributed as part of the next hosiery allocation.

The shortage of all types of nylons was still acute, so much so that during 1950 twenty-two questions about nylon were asked in the House of Commons, most of them concerning supplies of nylon stockings on the home market. Inevitably, with so little buying experience, women still thought in terms of "a pair of nylons." So after the first excitement of the "gossamer luxury" of 15 deniers had faded and the ribald comments of the "What lovely stockings—you can't see them!" variety

had died away, complaints began to be heard that nylons did not wear as well as they used to.

The great majority of the complainants did not realise that they were not comparing like with like but were assessing two different fabrics, of very different weight and performance. In most shops there was no choice of deniers among the very limited stock being sold on any particular day, so that many women were glad to get any pair of nylons in the right size. It is hardly surprising that customers who had liked the look of the new sheer nylons felt disappointed because they did not wear as well as the much thicker kind they had bought before, since they did not appreciate that they were buying a different product.





Advertisement for Hanes seamless stockings

The same thing happened in America. The hard textile fact that there is no such thing as an all-purpose stocking is one of those dreary truths that most people are quite naturally unwilling to believe. Nylon achieves the most remarkable combination of strength and glamour of any hosiery yarn but even nylon cannot offer the maximum of both in any one denier. When it comes to the buying point most people tend to choose glamour even at the expense of wearing qualities. In 1953 the preference for 15 denier was in the ratio of two to one, and this trend continued during 1954. The movement seems to be towards even finer yarns, such as the 12 denier now in production.

Fortunately there are now so many different types of nylons above the counter that there is no reason why any woman should not be able to find the parti-

cular kind she prefers—or, rather, a suitable variety of different kinds to wear with her various outfits. The vital fourteen inches between skirt hem and shoe can now be covered appropriately for every occasion.

A fashion-conscious woman will choose extra-sheer 12 deniers for special parties, sheer 15 deniers for her town clothes, and service weight 30 deniers when she wants thicker stockings. Twenty deniers, recently added to the range, give a useful semi-sheer weight. For the country, especially in cold weather, there are thick crimped nylons, so strong that they have been used as car tow-ropes, and an even thicker kind in fancy knit spun nylon, besides the plain and lace-patterned mesh knits.

This is merely the ground plan. There are also plenty of speciality stockings offered by individual manufacturers, using two-fold yarns to give new textures, special constructions such as pinpoint mesh, bareleg circular knits with no seams at all to wear with summer frocks, and so on. The movement towards butterflies on the ankle seems to have fluttered to its end but there are still dark seams and special heel effects.

Considering that most women's legs are designed on approximately the same principle, it is surprising how many different proportions in length and width at the various crucial points are wanted for each foot size. No one firm could possibly supply them all, but with nearly two hundred in the field the overall sizing range is now very comprehensive.

A final word to husbands and other gentlemen wishing to buy nylons. Three pairs of the same type and shade will be received much more enthusiastically than three different pairs. Whatever the statistics branch says, three separate twos do not equal six interchangeable stockings. And the wrong size is simply an admission that you have not given the matter proper attention. If her correct size is not readily ascertainable through the usual channels, try to get hold of one of her shoes. The measurement in inches along the side of her shoe from the back seam to the toe, minus one inch, will give a working estimate.

# I.C.I. NEWS

## MR. J. H. WADSWORTH

It is with great regret that we record the death on 17th October at the age of 67 of Mr. J. H. Wadsworth, a former director of I.C.I. who retired in March 1949. He had suffered a long illness, which he bore with his inveterate cheerfulness.

*Mr. R. A. Banks, I.C.I. Personnel Director, writes:*

Mr. Wadsworth's many friends will mourn his loss, but they will always retain happy and grateful memories of his kindness, charm and gentleness.

Trained as a solicitor, he combined a fervour for accuracy of statement and clarity of expression with a lively sense of humour. He was always ready to help anyone who asked and never seemed to harbour an unkind thought about anyone.

After coming up "the hard way" to qualify as a solicitor, he established himself in country practice, but joined Brunner, Mond & Co. in 1920 as assistant secretary. He soon distinguished himself by his handling of the High

Court action brought against that company by Lever Bros. in 1925; and on the formation of I.C.I. in 1926 he was promoted to be the first secretary of the Company and in 1929 at the early age of 41 he was appointed a director. From then until 1941, when he became responsible for the Company's affairs overseas, he was responsible for a variety of aspects of the Company's administration. He played as large a part as anyone in welding the four original companies into one and always put first in his thoughts and actions the idea of the I.C.I. family. He was proud of the I.C.I. spirit, which he did so much to foster, and spoke of his faith in it right up to the end.

Mr. Wadsworth was born and brought up in the country and remained throughout his life a countryman at heart, fond of the simple things of life, and especially of golf and fly-fishing. In his death we have lost a kind friend and yet another of that band of men who were intimately and importantly concerned with the earliest days of the Company.

## PENICILLIN'S 25th BIRTHDAY

An exhibition celebrating the twenty-fifth anniversary of penicillin was held in December at St. Mary's Hospital, London, in whose laboratories Sir Alexander Fleming first hit upon this great medical discovery. The jubilee of penicillin coincided with the centenary of the hospital's medical school, and among the objects placed by Queen Elizabeth the Queen Mother in the foundation stone of a new centenary building was a penicillin mould.

I.C.I., one of the four British penicillin manufacturers taking part in the exhibition, was a pioneer of penicillin production. As early as 1941 the Company was invited by Sir Howard Florey to collaborate in the research work he was doing at Oxford, and in May 1942 the first penicillin plant at Trafford Park started to operate. From that time onwards, despite all the immense problems associated with wartime production, the Company's output readily increased, and new and improved methods of culture were introduced. Among those presented to the Queen Mother was Mr. A. Q. Tollit, Publicity Manager of Pharmaceuticals Division.



The Queen Mother with Sir Alexander Fleming at the penicillin exhibition



## PHARMACEUTICALS DIVISION

On 1st January Imperial Chemical (Pharmaceuticals) Ltd.—henceforth to be known within I.C.I. as Pharmaceuticals Division—assumed full responsibility for the following works and departments formerly administered by the Dyestuffs Division: Regent Works (Linlithgow), Biological Department, Research Department, Medicinal Chemicals Division and the Department of Pharmacy.

The effect of this reorganisation is to give Pharmaceuticals Division direct control of the research effort concerned with medicinals and of the works where nearly all the products that it sells are finished and packed. Dyestuffs Division will, however, continue to supply Pharmaceuticals Division with most of the bulk drugs that it needs and to operate certain penicillin processing and packing facilities at Trafford Park Works.

### I.C.I. SCARF

At the recent Central Council it was announced that the I.C.I. scarf, to be made in the same colours as the I.C.I. tie but in 100% 'Terylene,' should be ready in the spring. The scarf will be about 10 in. x 38 in. and will sell at the cost price of about 10s. 6d. or 11s.

More than 10,000 I.C.I. ties have been ordered, and the greater proportion of them have been delivered. Orders have been received from employees of I.C.I. in eighteen overseas countries.

## BILLINGHAM DIVISION

### Donors answer Emergency Blood Call

The willingness of two Billingham blood donors to give urgently needed blood at less than thirty minutes' notice, and the speed with which they were contacted in the factory, were praised recently by the Tees area secretary of the National Blood Transfusion Service.

She was at a donor session at the Corporation Hall, Stockton, when, at 4.10 p.m., she received an urgent call from the Newcastle headquarters of the Transfusion Service for large quantities of blood of a rare group.

Needed for a child who had been injured and a 35-year-old woman who was about to undergo a serious operation, the blood required was of the B Rhesus Negative group, which is found in only twelve people in every thousand. By 4.25 the secretary had discovered that two men in the right blood group worked at the Billingham factory, and she at once rang the works telephone exchange.

When she explained that the only information she had about the men was that they were a Mr. G. R. Stewart and a Mr. W. Nattrass, the telephone operator put her through to the Labour Department Records Section. She then asked if the men could be at the West Gate by 4.40, so that she could take them by car to Stockton.

In fifteen minutes Records found that Mr. Nattrass was a maintenance rigger in Gas and Power Works and, with the help of Staff Department, that Mr. Stewart was a maintenance foreman in the 'Drikold' Section of Am-

monia Works. By 4.50 both were at Corporation Hall, Stockton, giving blood that was later given to the woman who was to undergo the serious operation. She recovered from the operation and is now convalescent.

### Second-biggest Polythene Drain

A new technique developed by Billingham engineers is being used in the laying of a 30 in. diameter plastic drain which forms part of an extension to the Sulphuric Acid Plant's drainage system.



Laying a 23 ft. section of the 'Alkathene' drain at Billingham

The second largest plastic drain laid in Britain, the new drain is made of 'Alkathene' tube and is 336 ft. long. It forms part of the drain which will carry effluent from the new sulphuric acid kiln and for 70 ft. of its length passes under British Railway's lines near the East Gate. (The largest plastic drain in use in this country is a 36 in. diameter 'Alkathene' drain recently laid at the United Sulphuric Acid Corporation's new plant at Widnes.)

The tube being used at Billingham is  $\frac{3}{8}$  in. thick and is delivered in lengths of 11 ft. 6 in. These are fusion-jointed in a hut on the site into sections 23 ft. long, and these sections are taken to the trench, placed on previously prepared concrete saddles, and jointed to the sections already laid so that a continuous pipe is formed. After jointing the pipe is surrounded with concrete.

The engineers who designed the drain had to ensure that the tube would be properly keyed to the concrete round it, and they have developed a new technique which is being used when the sections are prepared for laying.

Circles of 'Alkathene' lugs are fused on to the outside of the tube at 12 in. intervals, and mild steel rods are passed through these lugs to make hoops which give a good key to the concrete. Because 'Alkathene' is so flexible the tube normally sags under its own weight, and to overcome this wood formers are placed inside when jointing is being carried out and when concrete is being poured round the tube.

### Prudhoe Factory purchased by I.C.I.

I.C.I. has bought from the Board of Trade the factory at Prudhoe-on-Tyne which has been operated by the Company, as agents for the government, since 1942.

The transfer took place on 22nd November. It is not intended that there shall be any change in the present production of sulphate of ammonia in the factory, output should be maintained at the present level, and there should be no change in the present number employed as a result of the transfer. All conditions of pay and employment will continue, as previously, to be governed by the relevant agreements between I.C.I. and the trade unions concerned.

Prudhoe Factory is on the Tyne twelve miles west of Newcastle. It occupies an area of 200 acres and employs 750 people. It was designed for the government by Billingham Division and makes sulphate of ammonia by a process similar to that operated at Billingham, using anhydrite as a raw material.

## CENTRAL AGRICULTURAL CONTROL

### New Appointments

With effect on and from 1st November Dr. A. H. Lewis became the Central Agricultural Control director in charge of C.A.C. research; and Dr. W. G. Templeman and Dr. W. R. Boon (who is transferring from Dyestuffs Division) have been appointed Associate Research Managers at Jealott's Hill Research Station. Dr. C. C. Tanner is transferring to C.A.C. headquarters staff and will presently be travelling overseas on C.A.C. matters. The practical effect of this is to combine closely and immediately Jealott's Hill Research Station with Hawthorndale Laboratories. Hawthorndale is now an integral part of Jealott's Hill.

Dr. Lewis has had a most distinguished scientific career. A Somerset man, he was at that ancient foundation, Sexey's School in Bruton, going on to University

College at Reading in 1922. Here he took an honours degree in Chemistry at London University and has since proceeded Ph.D. and D.Sc. He is a Fellow of the Royal Institute of Chemistry and an Associate of the Imperial College of Tropical Agriculture in Trinidad, where he was in residence during 1927 and 1928. Before this, from 1926 to 1927, Dr. Lewis spent a year at Rothamsted Experimental Station, going to Jealott's Hill in 1928 as head of the Soils and Fertilizers Section. In 1944 he was appointed head of the Research Station itself.

Like all agricultural people, Dr. Lewis is extremely reluctant to talk about himself but is always prepared to liberate a flood of common sense at any scientific discussion. His only relaxation is gardening, since he claims that he is too old for Rugby football and cricket and not yet old enough for golf!

Dr. Boon is that *rara avis* in Dyestuffs Division, a Londoner, now returning south after eighteen years north of the Trent. After leaving school he went to London University (King's College), where he took an honours degree in Chemistry. He remained at King's as a physiologist for five years after graduating, joining the Dyestuffs Division of I.C.I. in August 1936 as a chemist. He was in charge of the section there which played such a leading part in the development of penicillin, and much of his time in recent years has been spent on pharmaceutical problems affecting I.C.(P).

He is married with three children, and says that his outside interests are entirely domestic but comprise the hobbies of gardening and woodwork.

Dr. William Templeman shares with Dr. Boon the same christian name, the same university and the same college. Both research managers insist that these links are purely fortuitous. Dr. Templeman graduated with honours in Botany in 1931 and thereafter did post-graduate work in plant physiology at the Imperial College of Science and at Rothamsted Experimental Station. He proceeded M.Sc. in 1932 and Ph.D. in 1943. In 1933 he was appointed assistant botanist to G. E. Blackman, now Professor of Agriculture at Oxford, and was made head of the Botanical Section at Jealott's Hill in 1935. His work during the war on hormone weedkillers and other phytocidal chemicals is world-famous, and he has contributed many papers on these subjects to scientific journals.

## DYESTUFFS DIVISION

### Brazilian Visitor at Huddersfield

In the course of removing bundles of new paper bags from a railway van at Huddersfield Works, Mr. S. Griffiths of Packages Department saw a spider fit to chill the blood. It was brown and hairy and far bigger than any spider he had seen before.

Undaunted, Mr. Griffiths went for a 2 lb. jam jar, brought it back to the van and captured the visitor as it was crawling up the side. He showed it to Mr. H. Stables of Transport Department. Mr. Stables showed it to Dr. A. Munn, assistant works medical officer; Dr. Munn sent





The fierce Brazilian spider found at Huddersfield Works (approximately half life size)

it to the Huddersfield medical officer of health, who asked the local authority on spiders, Mr. A. C. Braham, to identify it.

Mr. Braham's identification revealed that Mr. Griffiths had been braver than he knew. The spider was a *phoneutria fera* from Brazil, one of the world's few really poisonous spiders. Fortunately it was half asleep when Mr. Griffiths found it, or it might have bitten his fingers, with serious effects.

How the spider came to be so far from home is a mystery; but according to Mr. W. S. Bristowe, head of I.C.I. Central Staff Department and an authority on spiders, it was probably imported with merchandise. "*Phoneutria fera* is a reddish-brown spider," he writes, "which can reach a body length of more than 1½ in.,



The men who found the spider: Mr. Griffiths and Mr. Stables

which, with outstretched legs, would give a leg span of about 5 in. It is one of the comparatively few spiders in the world whose bite can have serious effects on man. Fingers should be kept well away, as it is very fierce and rapid in movement when in good health.

"It should not be confused with the somewhat smaller *Heteropoda venatoria*, which is a very common immigrant with bananas. *Heteropoda* is fawn-coloured, less hairy, and has front legs bent rather like those of a crab. Its bite need not be feared.

"For my part, give me *Phoneutria* every time. If *Heteropoda* is like a crab, *Phoneutria* can be likened to a lion."

### A Harvest of Prizes

Mr. C. Toyne, Section Leader of the Division Engineering Chemical Section at Huddersfield Works, recently reaped the reward of three years' concentrated effort and endeavour in the cultivation of chrysanthemums.

At the Skelmanthorpe and District Chrysanthemum Society Early Flowering Show, in addition to winning first prize in all the four beginners' classes Mr. Toyne was awarded the bronze medal for the best exhibit and the Members' Trophy for the most points and the blue ribbon for the best bloom. The day after, at Huddersfield Works Recreation Club's Horticultural Show, he secured the three first prizes and two certificates awarded by the National Chrysanthemum Society. A fortnight later he entered the Huddersfield and District Chrysanthemum Society Show, of which he is a member, and took nine prizes, including three firsts, four seconds and two thirds. He was awarded the Rose Bowl Trophy for obtaining the most points in the beginners' class.

Mr. Toyne's achievements in the horticultural field are all the more remarkable for having been accomplished in so short a time. Among the varieties that brought him notable success are "Red Flare," "Yellow Triumph," "White Wings," "Fred Yule" and "Una."

### GENERAL CHEMICALS DIVISION

#### Castner-Kellner Girl may be Football Queen

Runcorn football fans are hoping to see Mrs. Megan Maxfield, who works in the staff dining room at Castner-Kellner Works, elected Queen of English Football.

The competition for football queen is run by the National Federation of Supporters' Clubs. At the Runcorn F.C. supporters' club dance Mrs. Maxfield, who had never entered a beauty contest before, was persuaded to "have a go." She won the local contest (and a prize for £5 5s.) and goes forward as Runcorn's representative in the county finals. If she is successful she will represent Cheshire in the London final.

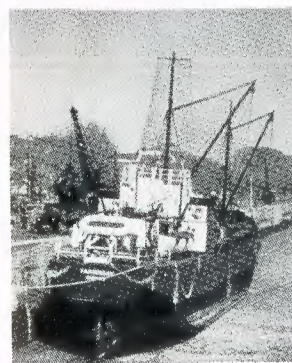
Mrs. Maxfield started work at Castner-Kellner after leaving school in 1948. In June last year she married Mr. Walter Maxfield from the Joiners' Shop; both she and her husband are keen supporters of Runcorn F.C. and never miss a game.



Mrs. Megan Maxfield, Runcorn's queen of football

### The Ship on the Cover

Although the ship *Farringay* on the cover of the November *Magazine* was probably "just another ship" to



M.V. Farringay on the Magazine cover

most readers, to readers at Castner-Kellner and Hillhouse Works she was a familiar sight. Since 1948 she has made regular runs to these works from Port Talbot, carrying carbide in drums. When she was photographed at Bideford she was unloading gas coal from Partington, and she also carries pig iron from Millom to Bristol Channel ports.

*Farringay*, a motor vessel, started life as a store carrier for the Normandy invasion. In 1946 she was demobilised and bought by Lt.-Cdr. J. H. K. Griffin, D.S.C., R.D., R.N.R., who had himself taken part in the Normandy landings. On one occasion Cdr. Griffin was recognised by a Castner-Kellner worker as having been his commanding officer in an L.S.(T) at one stage of the war.

### METALS DIVISION

#### Pensioner's Prize

Mr. James Averill, a Metals Division pensioner, had the surprise of his life recently when engaged in the unspectacular task of lifting potatoes. After unearthing a few modest spuds his fork met an almost irresistible object of considerable size. Digging carefully, Mr. Averill laid bare the strangest product of all his years of gardening—a potato half the size of the average baby.

The statistically minded will like to know that the monster potato weighed 3½lb.; it measured 16 in. from

end to end and 12 in. round the middle. Keen gardeners will be equally interested to learn that it was grown from potato peel. One piece containing four eyes was buried; in due course four little potato plants duly made their appearance, and it was one of these which produced the prize specimen.



The 16 in. potato and its proud owner, Mr. Averill

Mr. Averill retired eight years ago after spending 32 years in the Transport Department at Kynoch Works. Now that he is rising 74 he finds he has to ration his hours in the garden. He is considering a suggestion that he opens a chipped-potato shop to occupy the rest of his spare time!

### NOBEL DIVISION

#### Manchester and Leeds see 'Ardil'

Exhibitions of 'Ardil' blended fabrics and garments were held in Manchester and Leeds during November.

A feature of the Manchester exhibition was the collection of Lancashire woven cloths made by some thirty manufacturers in the area who are using 'Ardil.' Of particular interest among these were 'Ardil' cotton blends; they can be vat dyed (which means that the colours are fast) and are cheaper than wool/cotton blends.

In Leeds there were examples of how the Yorkshire woollen and worsted trades are using 'Ardil' blends, ranging from dresses to blankets, carpets and hatting felts. There was also a display of mass-dyed 'Ardil' fibres, now available in six fast colours.

At both exhibitions examples were shown of 'Ardil' blended garments and materials which have withstood gruelling practical tests; among them were an 'Ardil' wool





(Photo: Yorkshire Post)

'Ardil' blends in contrasting roles at the Leeds exhibition

raincoat which has been worn for seven years, a hand-knitted jumper which shows no sign of felting and shrinking after a dozen washes, and a carpet which has been walked over by 120,000 factory workers in the last six months.

### On the Mark

A splendid array of silver, plate and trophy decorated a long table in Ardeer Recreation Club's Bridge Room on 4th November—evidence that the Rifle Section enjoyed in 1953-4 one of the best seasons in its history. Three of the trophies were awards for excellent performance during last winter and in the summer competitions of 1954.

Some of the more important team awards were the Hunterston Trophy for the Ayrshire League, Division I; Sunshine Trophy for winning Division II of the West of Scotland League; and the Lincluden Trophy for winning



Ardeer Rifle Section with the trophies of a successful season

Division III of the Scottish Outdoor League (50 and 100 yards).

## PAINTS DIVISION

### Archers at Slough

Archery is the newest addition to the Slough Recreation Club's activities. It is believed that this Archery Section is the first to be formed in I.C.I.

Although its formation has occurred during the closed season the support is good, and outdoor practices take



Some of Slough's novice archers under instruction

place each week-end, weather permitting, at the club's sports ground at Duffield House.

It is hoped that by the 1955 summer season the members will have attained a sufficiently high standard of shooting to compete against some of the many other archery clubs in the surrounding districts.

Qualified coaching is being undertaken by members of the Buckinghamshire Archery Association, to which the section is affiliated.

## PLASTICS DIVISION

### The Godless Florin

When Miss Kathleen Smyth, a member of the Supply Department secretarial staff, tendered a florin in a shop in London recently the saleswoman refused to accept it. It was not, she said, legal tender; she had never seen one like it before.

When Miss Smyth returned to Welwyn she showed the coin to Mr. F. E. Ballin of Supply Department, whom she knew to be interested in numismatics. He identified it at once as a 'Godless' florin, so called because the words *Dei Gratia* do not appear after *Victoria Regina*. The coin, issued in 1849, is perfectly legal tender, like all silver issued in this country since 1816.

Mr. Ballin adds: "It may be of interest to readers to

learn that this denomination was introduced as a tentative step towards a decimal currency—an idea which has been discussed regularly in the 105 years since then and to all appearances is still as far from fruition as ever. This is the reason for the reverse inscription *One Florin One Tenth of a Pound*.

"Although, for the sake of brevity, the words *Dei Gratia* had been omitted from various copper coins of the early Georges, this particular piece evoked a certain amount of adverse comment, which earned it the name of the 'Godless' florin. For this reason no more coins of this particular design were issued after 1849. The year of the Great Exhibition, 1851, saw the introduction of the very beautiful Gothic florin, which, with minor alterations continued to be issued until 1887."

## SALT DIVISION

### Winsford Footballer in F.A. Victories

Honours fell thick and fast in November on Colin Gregory, who is a member of Winsford Works yard gang and in his spare time a quick-tackling, sure-footed full back. First he was selected to play for the F.A. XI against Oxford University at Oxford on the 17th. Next it was announced that he had been included in the team chosen by the Cheshire County F.A. to represent Cheshire against Lincolnshire at Scunthorpe on the 20th. Then came the news that he had been selected to play for an F.A. XI against Cambridge University at Cambridge on the 25th.

It can hardly have been a coincidence that Colin Gregory was a member of the winning team on each occasion. The F.A. XI beat Oxford 5-0 and Cambridge 4-2, and Cheshire beat Lincolnshire 5-2.

Mr. Gregory started his football career in the Northwich Junior League. Later he played for I.C.I. (Salt) in the Mid-Cheshire League, where he attracted the attention of the directors of Winsford United, whom he joined in the season 1951-2. His performance in the Cheshire County League soon made him a favourite with the Winsford spectators, who were quick to call him "a good lad"—high praise in footballing parlance. In the following season, however, he joined Northwich Vics, for whom he made 22 first team appearances. The opening of the present season found him again in Winsford's colours, which, despite an injury sustained midway in September, he has so far worn in twelve county league matches.

One of his summer recreations is bowls, and last season he was the winner of the Works B team's league average prize. He comes of a family of saltmen: his father and

grandfather (both now dead) were employed at Winsford Works during all their working lives.

## 'TERYLENE' COUNCIL

### 'Terylene' Outfit for Archie

At the National School Age Clothing Fair held in the Festival Hall, London, in November, a more-than-usually dapper Archie Andrews (assisted by Peter Brough) gave the commentary. He was dressed for the occasion in



Archie Andrews in 'Terylene' wool blazer and slacks

"Terylene" wool blazer and slacks. He had a human counterpart in Master 'Terylene'-'Ardil,' a small boy dressed entirely in clothes made from these fibres who, with Miss Nylon, opened the fair.

## I.C.I. (EXPORT) IRAQ

### I.C.I. at Baghdad's first Trade Fair

An I.C.I. stand occupied a prominent site at the British Trade Fair held in Baghdad from 25th October to 8th November. The first trade exhibition ever to have been held in Iraq, the fair was attended by an estimated 350,000 people (the total population of Iraq is five million) and was said by Sir Norman Kipping, Director-General of the Federation of British Industries, to have been an immense success.

The I.C.I. pavilion housed a large, purely I.C.I., exhibit showing how the resources of the Company are



put at the disposal of industry and agriculture in Iraq, and smaller displays by six of the British firms for which I.C.I. (Export) acts as agent in Iraq. Most of the products featured in the I.C.I. exhibit were those well known in Iraq, but 'Ardil' and 'Terylene' fabrics were on show, and much interest was created by a model of a patented floating water-purification tank of which the prototype has been built in the U.K. by Marston Excelsior Ltd. and is now on test.

For the duration of the fair a queue of people three deep was passing through the I.C.I. Pavilion. Businessmen from Syria, Jordan and Persia, as well as from Iraq, were among those who made commercial enquiries. A large number of Iraq Government officials, the British Ambassador to Iraq and the Lord Mayor of Baghdad were among the notable visitors.

It was only by dint of feverish day and night work that the I.C.I. stand—and the others at the fair—had been completed down to the last detail for the opening of the fair by King Feisal II. The disastrous floods of the summer had closed the Basra railway line, and all freight for the fair had to be shipped to Beirut and thence by road, under very rough conditions, to Baghdad.

### I.C.I. (EGYPT) S.A.E.

#### Chairman congratulates Egyptian Premier

This picture shows the chairman and managing director of I.C.I. (Egypt) S.A.E., Mr. T. M. Milne, shaking hands with Col. Nasser, the Prime Minister of Egypt, at a recent



The I.C.I. stand at Baghdad's first trade fair

reception. Mr. Milne was congratulating Col. Nasser on the successful outcome of the Canal Zone negotiations.

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### OUR NEXT ISSUE

In February we are privileged to publish an extraordinarily interesting account of what life is like on a polar expedition. Dr. C. G. M. Slessor of Dumfries Factory, Nobel Division, was a member of the 1952 British North Greenland Expedition. He was chosen to go on the expedition because of his knowledge of bad weather mountaineering. His fascinating account of how the expedition lived and worked is illustrated by some fine colour photographs.

The leading article in February is from Pharmaceuticals Division. The author has set out to tell, and in very large measure has succeeded in telling, the story of how a big research organisation like that of Pharmaceuticals Division sets about the discovery of a new drug. The drug in question around which the article is written is 'Mysoline,' discovered in 1949 and now generally recognised throughout the world as the leading drug for the control of epilepsy.

In addition we have two other features. The first, illustrated in colour, tells the coaching history which is the background of so many of the old inns of Britain. And the last is a winner of the holiday competition. In it Mr. Claude H. Bigg of Northern Ireland Sales Office, describes his encounters with the natives while on holiday in Donegal.

#### Correction

In the Information Note "A Newcomer to Plastics" published in our November issue the working temperature range of 'Fluon' was given as "from 100° to 300° C." This should have read "from *minus* 100° to 300° C."

# QUICKER BY RAIL

By F. M. S. Harmar-Brown (Head Office)

This is an account of an actual railway journey, as you can see by checking the times in Bradshaw. But the author, in a fit of prudence, has asked us to state that the characters are entirely the products of imagination.

My instructions were perfectly clear. "We have booked a room at the hotel," they wrote, "for the night of Thursday the 13th, and we suggest you catch the 4.45 train from Paddington for Kidderminster. There is no train for Stourport at that time, and we suggest you could take a bus to Stourport Bridge and then take a taxi to the hotel."

So I made a good start by catching the 4.45 from Paddington with time to spare, and settled myself in a corner seat. The 135½-mile journey to Kidderminster was quite unremarkable and contained no hint of what was to come—unless, perhaps, it was to be found in the Emett-like names of the stations; for this stretch of railway passes through some of the most euphonious stations in the whole of the British Isles, including Adlestrop (a name, and station, so fantastic that a famous poem has been written about it), Moreton-in-Marsh, Chipping Campden, Honeybourne (whose full name, Cow Honeybourne, was evidently too much even for the G.W.R.), Littleton and Badsey, Fladbury, and Wyre Halt.

At Evesham it began to rain, and a weather-beaten character sitting opposite me said that this was just what his cabbage plants needed. At Worcester (Shrub Hill) another weather-beaten character got in, leaned back with a sigh, and said that this rain was just what his cabbage plants needed. At Droitwich Spa an acquaintance of the first character got in, greeted his

friend, and asked how his cabbage plants were doing. He said fine, and that this rain was just what they needed. At Kidderminster (8.5 arr.) they all got out, and so did I.

With the confidence of one who has received his instructions I approached the ticket collector.

"Where," I said, "can I get the bus for Stourport Bridge?"

"Stourport Bridge?" he repeated doubtfully.

"Stourport Bridge," I said definitely. There was a long silence.

"Are you sure you don't mean Stourbridge?" he asked suspiciously. I was, naturally, filled with sudden doubt, and rummaged in my wallet for the instructions.

"No, here we are: 'take a bus to Stourport Bridge'; look"—and I pointed to the words "BUS, STOURPORT BRIDGE."

"Ah, maybe," he said doubtfully; "but I don't know anything about no bus. Reckon they mean Stourbridge, like."

"Well, it says here quite definitely *bus to Stourport Bridge*," I said firmly.

There was an even longer silence. The ticket collector showed no inclination to break it, but merely looked at me expectantly, as if, given time, I might come to my senses and decide on Stourbridge after all. The situation clearly called for something less



Russian than the mere restatement of my objectives, so I decided to try the Eden touch.

"This rain," I said craftily. "Just the thing for the cabbage plants." It worked like a charm.

"Ah," he said; and then, with the air of imparting top-secret particulars normally revealed only to the most senior members of the Railway Executive, he added "Tell you what. There's a *train* for Stourport. Over the bridge, due out now. Don't forget your ticket—shillin'—there's the booking office. I'll hold her while you get it. *George!*" (this to the engine driver of a rather seedy little train that looked as if it were going nowhere in particular) "Hold her a minute!"

Acutely conscious that George's engine was straining at her pistons while he held up the entire Severn Valley railway network on my account, I tore into the booking hall, slammed down a shilling, grabbed the ticket, swarmed over the iron footbridge, dashed down the platform, and hurled myself into a compartment. With a flourish on its whistle the little train began to move.

Meanwhile, as I was soon to realise, the station staff—ever solicitous of the safety of passengers entrusted to its care—had not been idle on my behalf. The ticket collector, having consigned me to the Stourport train, had evidently been smitten with pangs of remorse and doubt. As I was streaking over the bridge, the stationmaster must have come out of his little office and seen me. Presumably the sight of so much indecent haste arouses his curiosity.

"Where's that gentleman goin', Bert?"

Bert lifts his cap and scratches his head.

"Well, I don't rightly know, Mr. Biles. 'E *said* 'e wanted the bus to Stourport Bridge, and I said did 'e mean Stourbridge and 'e said no 'e thought not and then I told 'un about the 8.10 and off 'e dashes." The stationmaster strokes his chin.

"Bert, are you *sure* he didn't want Stourbridge?"

"Well, not rightly certain, Mr. Biles."

The stationmaster reaches a decision.

"Bert, we'm best to make sure. 'Twould be a terrible thing to put the gentleman on the 8.10 if he wanted the 8.38. Stop the train!"

Mind you, I did not actually hear this conversation, but it must have gone something like that, because just as my little train was pulling clear of the platform it ground to a sudden halt, the station echoed with shouted commands, there was a pounding of heavy feet over the iron footbridge, and a breathless ticket

collector levered himself up into my compartment.

"Excuse me, sir, but I just want to be rightly certain you didn't want Stourbridge." This, I felt, was where I came in. By now I didn't know what I wanted, and I didn't see much point in trying to find out.

"No, this train will suit me perfectly," I said with an assurance I was far from feeling.

"Ah, that's all right, then; I just wanted to be certain you hadn't got on the 8.10 by mistake." He dropped to the ground, whistles blew, flags waved, and we lurched uncertainly forward once again.

I felt profoundly uneasy. The ticket collector's whole manner had conveyed more clearly than any words that no one who took the 8.10 was ever seen again and that to embark upon it was an ill-advised procedure which he at least had done his best to avert. Opposite me sat two large, silent, hopeless-looking women. Between them was a large basket containing plants—cabbage plants, no doubt.

"Pardon me," I said, "but does this train go either to Stourport or Stourport Bridge?" The larger of the two women spoke.

"I'm afraid I don't know anything about Stourport. We're only going as far as Bewdley. We've just come into Kidder for the market, you see. D'you know anything about Stourport, Madge?"

"Why no, I really couldn't say. We've only come from Bewdley. I think it stops at Stourport, doesn't it, Flo?"

"I'm afraid I couldn't say as to that, Madge. I've never been further than Bewdley. We only go on the train when we go into Kidder, don't we Madge?"

"That's right, Flo."

"Well, never mind," I said rather hastily. "I expect it will get me somewhere."

They both looked at me as if I were dotty, and relapsed into a gloomy silence. So did I. I had hoped that there might be a map of the system displayed in a glass frame above the seat, as there is on my own local train, but there was nothing but a cracked mirror and two dim, sepia photographs of Minehead pier in 1926. I could not even reassure myself that this Bewdley was on the way to Stourport or Stourport Bridge, or wherever I was supposed to be going. I began to feel hungry. Over the darkness of the rain-clouds began to brood the greater darkness of twilight.

I looked out of the window. The rain-drenched grass of a steep cutting slid slowly by. I looked out of the other window—and then looked again. My



... Fred will put you right, they'd said—and he did ...

worst fears were realised: we were on a single-track line!

The train crawled to a halt. There was nothing in sight but damp green countryside and a desolate little hut in black, bitumen-coated corrugated iron labelled "Foley Park Halt." No one got out or in. After a few moments of silence, broken only by the steady hiss of rain, we moved slowly forward again. My hunger grew and my hope ebbed.

At length, through the deepening twilight, the glimmer of gas lamps loomed. The two large women began to gather up their parcels. The larger of them turned to me. "This is Bewdley. You ask Fred on the platform—he'll put you right, won't he, Madge."

"Ah, that's right, Flo. Yes, he'll put you right. Awful night, isn't it? Well, mustn't grumble—good for the cabbage plants. Good night!" And they disappeared into the rain—cheered up, no doubt, by the thought that the kettle would soon be on the hob in their own cosy back parlour.

I looked out for the omniscient Fred—and received another shock. The little train had lost its engine, which was puffing away into the distance. I began to wonder if there was a hotel in Bewdley, or even a police station. Then I saw what was obviously Fred, pulling along the platform a huge trolley on which rested a small crate with a hen in it.

"Excuse me," I shouted, "but can I get a train from

here to Stourport or Stourport Bridge?"

"Ah, you can get a train for Stourport all right. Just you stay where you are. Leaves in about ten minutes." And with a sound of mingled trundling and clucking he moved on up the platform. So, pinning the last of my faint hope to the cryptic remarks of Fred, I just stayed where I was. And at this point we must have three of those expressive stars to indicate the passage of time.

★ ★ ★

After about half an hour the engine came puffing in-

to sight from the opposite direction, hitched itself to what had been the back of my train, and with a perfunctory toot on the whistle we moved off the way we had come. Of course, I was gloomily convinced that we were simply going back to Kidderminster via Foley Park Halt, but the driver and Fred between them must have known what they were doing, because after no more than a brief pause at Burlish Halt we eventually pulled into a station clearly labelled "Stourport-on-Severn."

I will gloss over my mile walk, with a heavy bag, to the one garage in Stourport which boasted a taxi, and press on to the following morning. The man I had come to see greeted me warmly.

"Did you have a good journey? Get the bus all right?"

"Well, not exactly," I said. "They advised me at Kidderminster to go by train."

"By train?" he looked at me strangely. "You don't mean to say you came from Kidderminster to Stourport by *train*?"

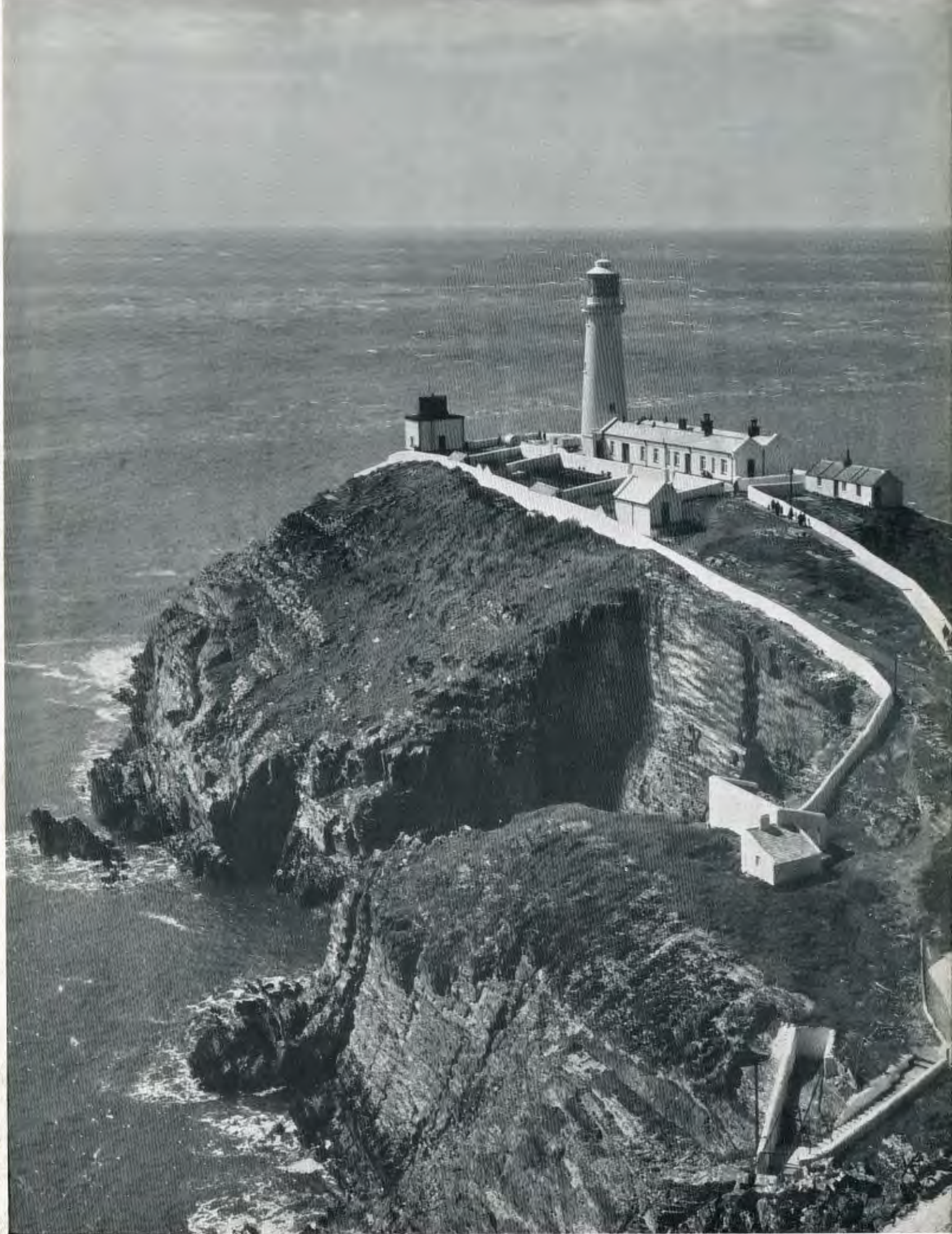
"Certainly," I said. "And why not?"

"How long did it take you?"

"About forty minutes, why?"

"Oh, nothing—except that Stourport is only a four-penny bus ride from Kidderminster. You could have walked it in forty-five minutes, *and* had time for a drink on the way!"





"South Stack Lighthouse"

Photo by L. G. Newman (Dyestuffs Division)